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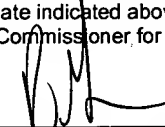
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant(s):	§	
Melody Vos and Jeff Slavin	§	Art Unit: 2175
	§	
Serial No.: 09/990,770	§	Examiner: Charles Rones
	§	
Filed: November 21, 2001	§	Docket No.: 149-0046US
	§	
For: Database Management System and	§	Customer No.: 29855
Method which Monitors Action	§	
Results and Adjusts User Parameters	§	
In Response	§	
	§	

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APPEAL BRIEF

This is an appeal from the rejection of claims 1-45 in the Final Office Action dated September 2, 2005.

TABLE OF CONTENTS

REAL PARTY IN INTEREST	1
RELATED APPEALS AND INTERFERENCES.....	2
STATUS OF CLAIMS	3
STATUS OF AMENDMENTS	4
SUMMARY OF CLAIMED SUBJECT MATTER.....	5
GROUND OF REJECTION TO BE REVIEWED ON APPEAL	8
ARGUMENT.....	9
A. REJECTION OF CLAIMS 1-45 UNDER JUDICIALLY CREATED DOCTRINE OF OBVIOUSNESS-TYPE DOUBLE PATENTING.....	9
B. REJECTIONS OF CLAIMS 1-45 UNDER 35 U.S.C. § 102(E)	11
C. CONCLUSION.....	16
CLAIMS APPENDIX.....	17
EVIDENCE APPENDIX.....	27
EXHIBIT A	28
EXHIBIT B.....	29
RELATED PROCEEDINGS APPENDIX	30

REAL PARTY IN INTEREST

The real party in interest in the above referenced patent application is BMC Software,
Inc. of Houston, Texas.

RELATED APPEALS AND INTERFERENCES

To the present knowledge of Appellants' representative, there are currently no related appeal or interference proceedings that will directly affect, or be directly affected by, or have a bearing on, the Board's decision in the present Appeal.

STATUS OF CLAIMS

In the above-identified Final Office Action, claims 1-45 were rejected. Claims 1-45 are appealed.

STATUS OF AMENDMENTS

A Reply was filed on November 2, 2005 responsive to the Final Office Action mailed September 2, 2005. No amendments have been filed subsequent to the Final Office Action.

SUMMARY OF CLAIMED SUBJECT MATTER

Assignee's claimed subject matter is directed to database management. As noted in the Background section of the present Specification, database management is often complex and fraught with difficulty. Prior art database management requires database administrators to have comprehensive training and knowledge of a database system, such as the solutions, tools, and utilities available to manage the database system. *See Specification* at page 1, ll. 24-28. In addition, prior art database management requires manual intervention by skilled database administrators to manage the database. *See Id.* at page 2, ll. 1-5.

In contrast to the prior art, independent claims 1, 16, and 31 are directed to automated database management techniques. Assignee's automated database management (referred to as an "Object Advisor" in the specification) is directed to reducing the need for administrator intervention and the level of skill required by the administrators. *See Id.* at page 17, ll. 13-14. In addition, the claimed automated database management is directed to maximizing system resources in management of the database. *See Id.* at page 18, ll. 11-22.

In Assignee's automated database management, one or more policies or definitions are associated with a database for managing database objects within the database. The definitions "may include a set of rules which, when applied to the [Database Management System] DBMS catalog, results in a list of database objects." *Id.* at page 21, ll. 13-14. These rules define the logical grouping of objects and may be stored in the Object Advisor Repository 646 of Figure 6. *See Id.* at page 21, ll. 14-16. Policies "include rules that may govern how objects and actions are managed by components." *Id.* at page 22, ll. 13-14. As such, policies instruct the Object Advisor on what actions to perform and when and how to perform those actions. *See Id.* at page 22, ll. 15-17.

Assignee's automated database management determines actions to modify database objects based on the one or more policies or definitions. *See e.g., Id.* at steps 502-520 806, 816, 836, 856, 874, and 894 in Figs. 5, 8-12, and 14. Determined actions include, but are not limited to, actions required to correct an actual problem related to database performance or to database object availability. *See Id.* at page 16, ll. 13-17. In addition, determined actions may include the most effective action for correcting a problem and, in addition, any additional action(s) that should be performed to prevent new or associated problems. *See Id.* at page 18, ll. 1-3.

The determined actions can also include proactive changes that improve the performance of the database objects. *See Id.* at page 24, ll. 20-22. For example, the determined action can involve spreading data across existing data sets or creating a new data set. *See Id.* at page 24, line 25 to page 25, line 7. In another example, the determined action can involve relocating specific datasets that are not to be located on the same DASD volume(s). *See Id.* at page 25, ll. 9-16. In yet another example, the determined action can involve allocating free space by a REORG utility or reducing frequent reorganization of database objects. *See Id.* at page 25, ll. 18-27. Finally, the determined action can involve turning off compression, applying compression to objects that would benefit, or determining the most effective compression algorithm for specific objects. *See Id.* at page 26, ll. 1-9.

Once the actions to modify database objects have been determined, Assignee's automated database management modifies the one or more database objects by performing those determined actions on the database objects. *See e.g.,* steps 522, 810, 820, 840, 858, and 876 in Figs. 5 and 8-12. For example, Execution Management Components build, manage, and execute a requested workload of determined actions. *See Specification* at page 18, ll. 27-28. The Execution component may enable the Object Advisor to automate error handling, ensure that objects remain

usable, and invoke the appropriate utility or command for executing the determined action. *See Id.* at page 20, ll. 12-15.

When the actions are performed, Assignee's automated database management monitors the results of modifying the database objects. *See e.g., Id.* at steps 824, 844, and 860 in Figs. 9-11. Monitoring the results can be preformed using the Data Collection Components to gather information about the database objects. *See Id.* at page 15, line 6-11. For example, the Data Collection Components can include an object usage collector 602, an object usage monitor 604, and an object statistics collector 610. *See Id.* at page 15, line 14 to page 16, line 10 and Figure 6. In addition, database object monitoring can be preformed using a Status Handling and Reporting component, which monitors completion of tasks and performs cleanup processing. *See Id.* at page 20, ll. 20-28.

Based on the monitored results, Assignee's automated database management reconfigures one or more of the policies or definitions associated with the database. *See Id.* at page 29, ll. 19-20 and step 862 in Fig. 11. As noted previously, the definitions "may include a set of rules which, when applied to the DBMS catalog, results in a list of database objects." *Id.* at page 21, ll. 13-14. These rules define the logical grouping of objects and may be stored in the Object Advisor Repository 646 of Figure 6. *See Id.* at page 21, ll. 14-16. As also noted above, the policies "include rules that may govern how objects and actions are managed by components." *Id.* at page 22, ll. 13-14. The policies may instruct the Object Advisor on what actions to perform and when and how to perform those actions. *See Id.* at page 22, ll. 15-17.

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

A. Claims 1 to 45 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as claiming the same invention as that of claims 1-21 of U.S. Patent No. 6,944,630.

B. Claims 1 to 45 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,370,522 to Agarwal et al.

ARGUMENT

A. Rejection of Claims 1-45 under Judicially Created Doctrine of Obviousness-type Double Patenting

In the Final Office Action, claims 1-45 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly claiming the same invention as that of claims 1-21 of U.S. Patent No. 6,944,630 (“the ‘630 Patent”). The Final Office Action states:

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are arguably broader than claim 1 in VOS et al. ‘630 which encompasses the same metes, bounds, and limitations. Therefore, it would be obvious to eliminate the limitations in the narrower claims, since it has been held that omission of an element and its function and a combination where the remaining elements perform the same functions as before involves only routine skill in the art. See In re Karlson, 136 USPQ 184.
[Final Office Action, pg. 3, ¶ 4]

Assignee respectfully traverses the rejection of claims 1-45 under the judicially created doctrine of obviousness-type double patenting. First, none of the claims 1-21 in the ‘630 Patent recites any limitations directed to one or more policies, one or more definitions, determining actions based on policies or definitions, nor reconfiguring one or more policies. (For the benefit of the Board, Assignee attaches Exhibit A containing a copy of the claims filed in an amendment under 37 C.F.R. § 1.312 in the Application Serial No. 09/990,583 issuing as the ‘630 Patent.) Because none of the claims in the ‘630 Patent recites the same limitations of claims 1-45 in the instant application, the claims in the ‘630 Patent do not encompass *the same metes, bounds, and limitations* as Assignee’s claims 1-45, as contended in the Final Office Action, and Assignee’s claims 1-45 are patentably distinct from the claims in the ‘630 Patent. *See* Exhibit A of the Evidence Appendix.

Second, the rejection offers the rationale from *In re Karlson* 50 C.C.P.A. 908, 311 F.2d 581, 136 USPQ 184 (CCPA 1963) that omission of an element and its function in a combination is obvious if the remaining elements perform the same functions as before. For this rationale to apply, it must be shown that the claims in the instant application perform the same function as the claims in the '630 Patent.

By way of example, claims in the '630 Patent are directed to “collecting statistics ...; determining characteristics of the database objects; determining actions....based on the characteristics...; automatically determining a schedule....based on the activity-level statistics; performing the actions...based on the schedule;...and monitoring results of the performing the actions...” See independent claim 1 of '630 Patent in Exhibit A of the Evidence Appendix.

In contrast to the '630 Patent and by way of example, claims in the instant application are directed to “associating one or more policies or definitions with the database for managing database objects; determining actions...based on the one or more policies or definitions; modifying the one or more database objects...; monitoring results ...; and reconfiguring the one or more policies or definitions...based on the results...” See Independent claim 1 in the instant application.

In general, the claims in the '630 Patent are directed to determining and performing actions on database objects based on characteristics and statistics, whereas claims in the instant application are directed to determining and performing actions on database objects based on policies or definitions associated with them and directed to reconfiguring the policies or definitions based on monitored results of the actions. Thus, when compared with each other, the claims in the instant application do not perform the same functions as the claims in the '630

Patent, and the rationale for obviousness presented in the Final Office Action is not applicable to the claims in the instant application.

Claims 1-45 do not encompass the same metes, bounds, and limitations as the claims in the '630 Patent, and claims 1-45 do not perform the same functions as the claims in the '630 Patent. Therefore, claims 1-45 are not rendered obvious over the claims of the '630 Patent under the judicially created doctrine of obviousness-type double patenting.

B. Rejections of Claims 1-45 under 35 U.S.C. § 102(e)

In the Final Office Action, claims 1-45 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Agarwal et al. (U.S. Pat. No. 6,370,522 B1). *See* Exhibit B in Evidence Appendix. Assignee respectfully traverses the conclusion that Agarwal et al. anticipates the listed claims 1-45 in so far as Agarwal et al. does not disclose all the limitations of independent claims 1, 16, and 31.

1. Legal Principles

“For a prior art reference to anticipate in terms of 35 U.S.C. 102, every element of the claimed invention must be identically shown in a single reference.” *Diversitech Corp. v. Century Steps, Inc.*, 850 F.2d 675, 677, 7 U.S.P.Q.2d 1315, 1317 (Fed. Cir. 1988). Furthermore, the “identical invention must be shown in as complete detail as is contained in the patent claim” (*Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989), *cert. denied*, 493 U.S. 853 (1989)), and the “elements must be arranged as in the claim under review” (*In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990), *reh'g denied*, 1990 U.S. App. LEXIS 19971 (Fed. Cir. 1990)). *See also* M.P.E.P. 2131.

In accordance with established law, for Agarwal et al. to anticipate claims 1-45, Agarwal et al. must disclose each element contained in the claims, and there must be no difference between the claimed invention and the disclosure of Agarwal et al.

2. Assignee's claims

Each of Assignee's claims 1 to 45 is directed to automated database management. For example, claim 1 requires that one or more policies¹ or definitions² be associated with a database for managing database objects³ of the database. During automated database management, actions⁴ are determined. The actions are to be performed on one or more database objects to modify them based on the one or more policies or definitions associated with the database objects. The database objects are modified by performing the actions on the database objects, and results of modifying the database objects are monitored. In addition, the one or more policies or definitions associated with the database are reconfigured based on the results of modifying the database objects.

3. Review of Agarwal et al.

Agarwal et al. appears to be directed to optimizing responses to SQL statements when a database system encounters non-native objects for which it does not have built-in support. *See*

¹ Policies associated with a database are defined as rules that may govern how database objects and actions are managed by components, and the policies may instruct what actions are to be performed and when and how to perform those actions. *See e.g., Id.* at page 22, ll. 13-17.

² Definitions associated with a database are defined as a set of rules which, when applied to a database catalog, produces a list of database objects. *See e.g., Id.* at page 21, ll. 13-14.

³ Database objects can be data stored in a database of a storage device or file server (224). *See e.g., Present Specification* at page 12, ll. 10-13.

⁴ Actions to modify database objects can be actions to correct performance of the database management system, to prevent new or associated problems, to spread data across existing data sets, to create a new data set, to relocate specific datasets, to allocate free space by a REORG utility, to reduce frequent reorganization of database objects, to turn off compression, to apply compression, or to determine the most effective compression algorithm for specific objects. *See e.g., Id.* at page 16, ll. 13-17; page 18, ll. 1-3; page 24, line 25 to page 25, line 7; page 25, ll. 9-16; page 25, ll. 18-27; and page 26, ll. 1-9.

Agarwal et al. at Abstract, col. 3, ll. 31-32, and col. 4, ll. 48-54. Agarwal et al. discloses an optimizer (202) that receives a query directed to a database system in the form of an SQL statement (222) that has a predicate. The predicate involves a registered object or type of object. The optimizer (202) generates possible execution plans (214) involving the object and uses a cost function to estimate the costs of the execution plans (214). The estimated costs for each execution plan (214) are compared, and the optimizer (202) selects the execution plan (214) with the lowest relative cost. *See* Agarwal et al. at col. 4, ll. 20-47; Figures 1 and 2; *See also* Agarwal et al. at col. 44, ll. 16-25.

4. Discussion

In rejecting claims 1-45 as anticipated by Agarwal et al., the Final Office Action selects various portions of Agarwal et al. and contends that those selected portions teach or suggest Assignee's claim limitations. Assignee's claims must be considered in their entirety when compared to Agarwal et al. The portions selectively picked from Agarwal et al. do not describe each of Assignee's claimed limitations, are not arranged as in the claims and are not described in as complete detail as contained in the claims. Therefore, as a matter of law, Agarwal et al. cannot anticipate claims 1-45.

In a first example, the Final Office Action argues that Agarwal et al. at col. 15, lines 36-67 teaches and suggests Assignee's limitation pertaining to determining actions because “‘determining actions’ reads on ‘create.’” *Final Office Action*, pg. 4, ¶ 6. Actually, Agarwal et al. discloses that a “creator” (*i.e.*, an administrator of a computer system) can elect to have only a single granularity of cost/selectivity functions, which are used to estimate the costs of execution plans. “Determining actions to be performed on one or more database objects to modify the one or more database objects based on the one or more policies or definitions” as

recited in claim 1, for example, does not read on having an administrator make a choice as to how detailed a cost/selectivity function should be. For one, the cost/selectivity function is used to estimate the cost of execution plans and is not disclosed as actions that are determined to modify database objects, as recited in Assignee's claims. Second, having an administrator perform such a function is not directed to automated database management, as are Assignee's claims.

In a second example, the Final Office Action argues that Agarwal et al. at col. 14, lines 1-25 teaches and suggests Assignee's limitation of performing actions because "'performing actions' reads on 'registration is being made...and...alternative execution plan.'" *Final Office Action*, pg. 4, ¶ 6. Actually, Agarwal et al. discusses an association table (505) for the optimizer (202) in which object types having a cost function are registered with particular objects in a database system. This association table (505) is used to call the cost function for the object type of an associated object in an SQL statement. *See* Agarwal et al. at col. 13, line 61 to col. 14, line 25 and Figure 5. "Modifying the one or more database objects by performing the actions on the database objects" as recited in claim 1, for example, does not read on having an association table that registers object types having a cost function with particular objects in a database system.

In a third example, the Final Office Action argues that Agarwal et al. at col. 5, lines 16-30 teaches and suggests monitoring results of modifying the database objects. *Final Office Action*, pg. 4, ¶ 6. Actually, Agarwal et al. discusses that the optimizer (202) has the goal of minimizing resource use necessary to process SQL statements. Hints (224) are passed to the optimizer (202) within the SQL statements to the optimizer (202). *See* Agarwal et al. at col. 5, lines 16-30. Passing hints in an SQL statement so that an optimizer can process the SQL

statements using fewer resources does not disclose monitoring results of performing determined actions on database objects to modify the databases object, as recited in Assignee's claims.

Finally, the Final Office Action argues that Agarwal et al. at col. 4, lines 30-50 teaches and suggests Assignee's limitation pertaining to reconfiguring the one or more policies or definitions associated with the database based on the results of modifying the database objects because "'policies' reads on 'execution plans'" and "'modifying the database objects' reads on 'objects...which does not build in support.'" *Final Office Action*, pg. 4, ¶ 6. Actually, Agarwal et al. discloses optimizing responses to SQL statements when a database system encounters non-native objects for which it does not have built-in support. *See* Agarwal et al. at Abstract and col. 4, ll. 48-54. As noted previously, the optimizer (202) in Agarwal et al. receives an SQL statement (222), generates possible execution plans (214), estimates the costs of the execution plans (214), and simply selects the execution plan (214) with the lowest relative cost. *See* Agarwal et al. at col. 4, ll. 20-47; Figures 1 and 2. There is no teaching or suggestion in Agarwal et al. of modifying database objects by performing determined actions on the database objects, monitoring results of performing the determined actions, and reconfiguring one or more policies or definitions that are associated with the database object and that are used to determine the actions to modify the database objects, as required in Assignee's claims.

The Examiner's rejection uses selective portions and language from Agarwal et al. and attempts to suggest from those selective portions that Agarwal et al. discloses the limitations of Assignee's claims. As evidenced above, however, the contrast between Assignee's claims 1-45 and what is actually disclosed in Agarwal et al. shows that Agarwal et al. fails to disclose or even suggest the limitations of Assignee's claims 1-45. As a consequence, neither does

Agarwal et al. describe Assignee's claimed limitations in as complete detail as contained in the claims. For at least these reasons, Agarwal et al. cannot anticipate claims 1-45.


C. Conclusion

Claims 1-45 in the instant application are not rendered obvious over the claims of the '630 Patent under the judicially created doctrine of obviousness-type double patenting because (1) claims 1-45 do not encompass the same metes, bounds, and limitations as the claims in the '630 Patent and (2) claims 1-45 do not perform the same functions as the claims in the '630 Patent.

In addition, Agarwal et al. does not teach or suggest all of the limitations of Assignee's claims 1-45. At most, Agarwal et al. discloses an optimizer that receives an SQL statement, generates possible execution plans, estimates the costs of the execution plans, and selects the execution plan with the lowest relative cost. Therefore, Agarwal et al. cannot anticipate Assignee's claims 1-45. Consequently, Assignee respectfully requests that the Board grant Assignee's appeal by withdrawing the rejection of claims 1-45 under the judicially created doctrine of obviousness-type double patenting and by withdrawing the rejection of claims 1-45 under 35 U.S.C. § 102(e).

Respectfully submitted,

Feb. 2, 2006
Date


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CLAIMS APPENDIX

1. (Previously Presented) An automated database management method for a database comprising one or more database objects, the method comprising:
 - associating one or more policies or definitions with the database for managing database objects;
 - determining actions to be performed on one or more database objects to modify the one or more database objects based on the one or more policies or definitions;
 - modifying the one or more database objects by performing the actions on the database objects;
 - monitoring results of modifying the database objects; and
 - reconfiguring the one or more policies or definitions associated with the database based on the results of modifying the database objects.
2. (Original) The database management method of claim 1, further comprising:
 - automatically determining a schedule for performing the actions on the database objects, wherein the performing the actions on the database objects comprises performing the actions on the database objects based on the schedule.
3. (Original) The database management method of claim 2, wherein the performing the actions on the database objects based on the schedule comprises automatically performing the actions on the database objects based on the schedule.

4. (Original) The database management method of claim 1, further comprising:
confirming the performing the actions on the database objects.
5. (Previously Presented) The database management method of claim 1, further comprising:
collecting statistics relating to operation of the database; and
determining characteristics of the database objects.
6. (Original) The database management method of claim 5, wherein the determining the characteristics of the database objects comprises automatically determining the characteristics of the database objects.
7. (Original) The database management method of claim 5, wherein the determining the actions to be performed on the database objects comprises determining the actions to be performed on the database objects based on the characteristics of the database objects.
8. (Original) The database management method of claim 7, wherein the determining the actions to be performed on the database objects based on the characteristics of the database objects comprises automatically determining the actions to be performed on the database objects based on the characteristics of the database objects.
9. (Original) The database management method of claim 5, wherein the statistics comprise object-level statistics.

10. (Original) The database management method of claim 5, wherein the statistics comprise activity-level statistics.

11. (Original) The database management method of claim 5, wherein the determining the characteristics of the database objects comprises determining the characteristics of the database objects using the collected statistics.

12. (Original) The database management method of claim 5, wherein the determining the characteristics of the database objects comprises determining the characteristics of the database objects using the one or more policies.

13. (Original) The database management method of claim 5, wherein the determining the characteristics of the database objects comprises determining the characteristics of the database objects using the one or more definitions.

14. (Original) The database management method of claim 1, further comprising:
customizing the one or more definitions.

15. (Original) The database management method of claim 1, further comprising: customizing the one or more policies.

16. (Previously Presented) A carrier medium comprising program instructions for a database comprising one or more database objects, wherein the program instructions are computer-executable to implement:

associating one or more policies or definitions with the database for managing database objects;

determining actions to be performed on one or more database objects to modify the one or more database objects based on the one or more policies or definitions;

modifying the one or more database objects by performing the actions on the database objects;

monitoring results of modifying the database objects; and

reconfiguring the one or more policies or definitions associated with the database based on the results of modifying the database objects.

17. (Original) The carrier medium of claim 16, wherein the program instructions are further computer-executable to implement:

automatically determining a schedule for performing the actions on the database objects, wherein the performing the actions on the database objects comprises performing the actions on the database objects based on the schedule.

18. (Original) The carrier medium of claim 17, wherein the performing the actions on the database objects based on the schedule comprises automatically performing the actions on the database objects based on the schedule.

19. (Original) The carrier medium of claim 16, wherein the program instructions are further computer-executable to implement:

confirming the performing the actions on the database objects.

20. (Previously Presented) The carrier medium of claim 16, wherein the program instructions are further computer-executable to implement:

collecting statistics relating to operation of the database; and

determining characteristics of the database objects.

21. (Original) The carrier medium of claim 20, wherein the determining the characteristics of the database objects comprises automatically determining the characteristics of the database objects.

22. (Original) The carrier medium of claim 20, wherein the determining the actions to be performed on the database objects comprises determining the actions to be performed on the database objects based on the characteristics of the database objects.

23. (Original) The carrier medium of claim 22, wherein the determining the actions to be performed on the database objects based on the characteristics of the database objects comprises automatically determining the actions to be performed on the database objects based on the characteristics of the database objects.

24. (Original) The carrier medium of claim 20, wherein the statistics comprise object-level statistics.

25. (Original) The carrier medium of claim 20, wherein the statistics comprise activity-level statistics.

26. (Original) The carrier medium of claim 20, wherein the determining the characteristics of the database objects comprises determining the characteristics of the database objects using the collected statistics.

27. (Original) The carrier medium of claim 20, wherein the determining the characteristics of the database objects comprises determining the characteristics of the database objects using the one or more policies.

28. (Original) The carrier medium of claim 20, wherein the determining the characteristics of the database objects comprises determining the characteristics of the database objects using the one or more definitions.

29. (Original) The carrier medium of claim 16, wherein the program instructions are further computer-executable to implement:

customizing the one or more definitions.

30. (Original) The carrier medium of claim 16, wherein the program instructions are further computer-executable to implement: customizing the one or more policies.

31. (Previously Presented) A database management system comprising:

a CPU;

a database coupled to the CPU, wherein the database comprises one or more database objects; and

a memory coupled to the CPU, wherein the memory stores program instructions which are executable by the CPU to:

associate one or more policies or definitions with the database for managing database objects;

determine actions to be performed on the database objects to modify the database objects based on the one or more policies or definitions;

modify the database objects by performing the actions on the database objects;

monitor results of modifying the database objects; and

reconfigure the one or more policies or definitions associated with the database based on the results of modifying the database objects.

32. (Original) The database management system of claim 31, wherein the program instructions are further executable by the CPU to:

automatically determine a schedule for performing the actions on the database objects,

wherein in performing the actions on the database objects, the program instructions are further executable by the CPU to perform the actions on the database objects based on the schedule.

33. (Original) The database management system of claim 32, wherein in performing the actions on the database objects based on the schedule, the program instructions are further executable by the CPU to automatically perform the actions on the database objects based on the schedule.

34. (Original) The database management system of claim 31, wherein the program instructions are further executable by the CPU to:

confirm the performing the actions on the database objects.

35. (Previously Presented) The database management system of claim 31, wherein the program instructions are further executable by the CPU to:

collect statistics relating to operation of the database; and
determine characteristics of the database objects.

36. (Original) The database management system of claim 35, wherein in determining the characteristics of the database objects, the program instructions are further executable by the CPU to automatically determine the characteristics of the database objects.

37. (Original) The database management system of claim 35, wherein in determining the actions to be performed on the database objects, the program instructions are further executable by the CPU to determine the actions to be performed on the database objects based on the characteristics of the database objects.

38. (Original) The database management system of claim 37, wherein in determining the actions to be performed on the database objects based on the characteristics of the database objects, the program instructions are further executable by the CPU to automatically determine the actions to be performed on the database objects based on the characteristics of the database objects.

39. (Original) The database management system of claim 35, wherein the statistics comprise object-level statistics.

40. (Original) The database management system of claim 35, wherein the statistics comprise activity-level statistics.

41. (Original) The database management system of claim 35, wherein in determining the characteristics of the database objects, the program instructions are further executable by the CPU to determine the characteristics of the database objects using the collected statistics.

42. (Original) The database management system of claim 35, wherein in determining the characteristics of the database objects, the program instructions are further executable by the CPU to determine the characteristics of the database objects using the one or more policies.

43. (Original) The database management system of claim 35, wherein in determining the characteristics of the database objects, the program instructions are further executable by the CPU to determine the characteristics of the database objects using the one or more definitions.

44. (Original) The database management system of claim 31, wherein the program instructions are further executable by the CPU to:
customize the one or more definitions.

45. (Original) The database management system of claim 31, wherein the program instructions are further executable by the CPU to: customize the one or more policies.

EVIDENCE APPENDIX

Exhibit A: Copy of claims entered in an Amendment filed under 37 C.F.R. § 1.312 for Application Serial No. 09/990,583 issued as U.S. Patent No. 6,944,630 to Voss et al. The claims were cited in the rejection of claims 1-45 under obviousness-type double patenting in the Final Office Action mailed September 2, 2005.

Exhibit B: Copy of U.S. Patent No. 6,370,522 to Agarwal et al. cited in the rejection under 35 U.S.C. § 102(e) in the Final Office Action mailed September 2, 2005.

Exhibit A

Appl. No.: 09/990,583
Amdt. under 37 CFR 1.312
February 15, 2005

I. AMENDMENTS TO THE CLAIMS:

The following listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Original) A database management method comprising:
collecting statistics relating to operation of a database, wherein the database comprises one or more database objects, and wherein the statistics comprise activity-level statistics, wherein the activity-level statistics measure a level of activity of the one or more database objects;
determining characteristics of the database objects;
determining actions to be performed on the database objects based on the characteristics of the database objects;
automatically determining a schedule for performing the actions on the database objects, wherein the schedule is based on the activity-level statistics;
performing the actions on the database objects based on the schedule;
confirming the performing the actions on the database objects; and
monitoring results of the performing the actions on the database objects.
2. (Original) The database management method of claim 1, wherein the statistics comprise object-level statistics.
3. (Original) The database management method of claim 1, wherein the determining the characteristics of the database objects comprises determining the characteristics of the database objects using the collected statistics.
- 4-7. (Cancelled)

Appl. No.: 09/990,583
Amdt. under 37 CFR 1.312
February 15, 2005

8. (Original) The database management method of claim 1, further comprising: analyzing results of the performing the actions on the database objects.

9. (Cancelled)

10. (Original) The database management method of claim 1, wherein the determining the characteristics of the database objects comprises automatically determining the characteristics of the database objects.

11. (Original) The database management method of claim 1, wherein the determining the actions to be performed on the database objects based on the characteristics of the database objects comprises automatically determining the actions to be performed on the database objects based on the characteristics of the database objects.

12. (Original) The database management method of claim 1, wherein the performing the actions on the database objects based on the schedule comprises automatically performing the actions on the database objects based on the schedule.

13. (Original) A carrier medium comprising program instructions, wherein the program instructions are computer-executable to implement:

collecting statistics relating to operation of a database, wherein the database comprises one or more database objects, and wherein the statistics comprise activity-level statistics, wherein the activity-level statistics measure a level of activity of the one or more database objects;

determining characteristics of the database objects;

determining actions to be performed on the database objects based on the characteristics of the database objects;

automatically determining a schedule for performing the actions on the database

Appl. No.: 09/990,583
Amdt. under 37 CFR 1.312
February 15, 2005

objects, wherein the schedule is based on the activity-level statistics;
performing the actions on the database objects based on the schedule;
confirming the performing the actions on the database objects; and
monitoring results of the performing the actions on the database objects.

14. (Original) The carrier medium of claim 13, wherein the statistics comprise object-level statistics.

15. (Original) The carrier medium of claim 13, wherein the determining the characteristics of the database objects comprises determining the characteristics of the database objects using the collected statistics.

16-19. (Cancelled)

20. (Original) The carrier medium of claim 13, wherein the program instructions are further computer-executable to implement:
analyzing results of the performing the actions on the database objects.

21. (Cancelled)

22. (Original) The carrier medium of claim 13, wherein the determining the characteristics of the database objects comprises automatically determining the characteristics of the database objects.

23. (Original) The carrier medium of claim 13, wherein the determining the actions to be performed on the database objects based on the characteristics of the database objects comprises automatically determining the actions to be performed on the database objects based on the characteristics of the database objects.

Appl. No.: 09/990,583
Amdt. under 37 CFR 1.312
February 15, 2005

24. (Original) The carrier medium of claim 13, wherein the performing the actions on the database objects based on the schedule comprises automatically performing the actions on the database objects based on the schedule.

25. (Original) A database management system comprising:
a CPU;
a database coupled to the CPU, wherein the database comprises one or more database objects;
a memory coupled to the CPU, wherein the memory stores program instructions which are executable by the CPU to:
collect statistics relating to operation of the database, wherein the statistics comprise activity-level statistics, and wherein the activity-level statistics measure a level of activity of the one or more database objects;
determine characteristics of the database objects;
determine actions to be performed on the database objects based on the characteristics of the database objects;
automatically determine a schedule for performing the actions on the database objects, wherein the schedule is based on the activity-level statistics;
perform the actions on the database objects based on the schedule;
confirm the performing the actions on the database objects; and
monitor results of the performing the actions on the database objects.

26. (Original) The database management system of claim 25, wherein the statistics comprise object-level statistics.

27. (Original) The database management system of claim 25, wherein in determining the characteristics of the database objects, the program instructions are further executable by the CPU to determine the characteristics of the database objects using the collected statistics.

Appl. No.: 09/990,583
Amdt. under 37 CFR 1.312
February 15, 2005

28-31. (Cancelled)

32. (Original) The database management system of claim 25, wherein the program instructions are further executable by the CPU to: analyze results of the performing the actions on the database objects.

33. (Cancelled)

34. (Original) The database management system of claim 25, wherein in determining the characteristics of the database objects, the program instructions are further executable by the CPU to automatically determine the characteristics of the database objects.

35. (Original) The database management system of claim 25, wherein in determining the actions to be performed on the database objects based on the characteristics of the database objects, the program instructions are further executable by the CPU to automatically determine the actions to be performed on the database objects based on the characteristics of the database objects.

36. (Original) The database management system of claim 25, wherein in performing the actions on the database objects based on the schedule, the program instructions are further executable by the CPU to automatically perform the actions on the database objects based on the schedule.

Exhibit B

RELATED PROCEEDINGS APPENDIX

To the present knowledge of Appellants' representative, there are currently no related appeal or interference proceedings that will directly affect, or be directly affected by, or have a bearing on, the Board's decision in the present Appeal. Accordingly, this appendix is intentionally empty.